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AF/IFW

Atty. Docket Nbr. RSW920030196US1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of James M. Mathewson II et al.

Serial Nbr: 10/666,287

Filed: September 19, 2003

For: Using Radio Frequency Identification with Transaction-Specific Correlator Values to Detect and/or Prevent Theft and Shoplifting

Art Unit: 2876

Examiner: Ahshik Kim

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF IN SUPPORT OF
APPEAL FROM THE PRIMARY EXAMINER TO THE BOARD OF APPEALS

Sir:

Appellants herewith submit an appeal brief in support of the appeal to the Board of Appeals from the decision dated June 23, 2005 of the Primary Examiner finally rejecting all Claims 1 - 21.

The appeal brief fee of \$500.00 is:

- Enclosed.
Not required. (Fee paid in prior appeal.)
Charged to Deposit Account No. 09/0461. A duplicate copy of this sheet is enclosed.

Oral Hearing is:

- Not requested.
Requested. See first paragraph of accompanying appeal brief.

Date: November 4, 2005

Respectfully submitted,

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Attorney Docket RSW920030196US1

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Art Unit: 2876 Examiner: Ahshik Kim

APPELLANTS' BRIEF ON APPEAL

**Mail Stop Appeal Brief - Patents
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450**

Sir:

This is an Appeal seeking reversal of the decision of the Primary Examiner, finally rejecting all current claims of the subject patent application.

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1) REAL PARTY IN INTEREST

The real party in interest is the Assignee, International Business Machines Corporation (“IBM”).

2) RELATED APPEALS AND INTERFERENCES

Appellants, the Appellants’ legal representative, and the assignee, have no personal knowledge of any other appeals or interferences which will directly affect or be directly affected by or have a bearing on the Board’s decision in the pending appeal.

3) STATUS OF CLAIMS

Claims 1 - 21 stand rejected. Claims 1 - 21 are under appeal.

4) STATUS OF AMENDMENTS

An Amendment After Final Rejection was filed on August 5, 2005, responsive to the Final Rejection mailed on June 23, 2005. The amendments made therein have been entered.

5) SUMMARY OF CLAIMED SUBJECT MATTER

1. Appellants’ independent Claims 1, 8, and 15 specify a first limitation of “creating a unique correlator value, for a current transaction comprising a plurality of items being purchased together ...” (Claim 1, lines 3 - 4, emphasis added) and a second limitation of “storing the unique correlator value in an RFID tag affixed to each of the items, such that correlator values stored in RFID tags affixed to a group of items can subsequently be compared to determine whether the items in the group were all purchased in one transaction” (Claim 1, lines 5 - 7, emphasis added).

In other words, when a shopper presents a group of items for purchase, a unique correlator for this particular transaction is created and written into the RFID tags of the items. Specification, p. 18, lines 4 - 6. This enables subsequently comparing the correlator value in the tag of each of the items possessed by the shopper: if all of the correlator values are identical, then it can be determined that the shopper's currently-possessed items were all purchased in one transaction (and, therefore, that they were not stolen from the seller). Specification, p. 18, lines 6 - 11.

2. Independent Claims 3, 10, and 17 specify a first limitation of "locating, in an RFID tag affixed to each of a plurality of items possessed by a shopper, a correlator value previously written therein as a unique, transaction-specific value" (Claim 3, lines 3 - 4, emphasis added). Whereas Claims 1, 8, and 15 are directed toward creating and storing the correlator values, Claims 3, 10, and 17 are directed toward previously-written correlator values and use thereof to determine whether items were potentially not paid for (e.g., whether the items were stolen).

3. Independent Claims 8 and 15, and their dependent Claims 9 and 16, include means plus function terminology. Structure, material, or acts supporting this terminology are described in . Appellants' specification, as will now be described. With regard to independent Claims 8 and 15, the text on p. 17, line 18 - p. 18, line 3 (which refers to the discussion of the third preferred embodiment, to be found on p. 15, lines 11 - 18) and **Fig. 9A**, reference number **910** describe the "means for creating a unique correlator value ..." (see also reference numbers **1000 - 1010** of **Fig. 10A**), and the text on p. 18, lines 5 - 6 and **Fig. 9A**, reference number **920** describe the "means for storing ... in an RFID tag ..." (see also reference number **1020** of **Fig. 10A**). The "means for

storing ... in a database ...”, as claimed in dependent Claims 9 and 16, are described on p. 17, lines 8 - 17; p. 18, lines 11 - 13 and 17 - 18; and p. 19, line 9, and are illustrated at reference number **970 of Fig. 9B**.

4. Independent Claims 10 and 17, and their dependent Claims 11 and 13 - 14 as well as 18 and 20 - 21, include means plus function terminology. Structure, material, or acts supporting this terminology are described in Appellants’ specification, as will now be described. With regard to independent Claims 10 and 17, the text on p. 18, lines 6 - 8 and **Fig. 9B**, reference number **960** describe the “means for locating ... a unique correlator value ...” (see also reference numbers **1050 - 1060 of Fig. 10B**), and the “means of concluding ...” is described in text on p. 18, lines 9 - 19 (and in particular, lines 9 - 10) and is shown at reference number **980 of Fig. 9B** (see also reference numbers **1070 - 1095 of Fig. 10B**). The “means for determining ... by searching a database ...” specified in dependent Claims 11 and 18 are described on p. 17, lines 8 - 17; p. 18, lines 11 - 13 and 17 - 18; and p. 19, line 9, and are illustrated at reference number **970 of Fig. 9B** (see also reference number **1090 of Fig. 10B**). The “means for concluding ...” from Claims 11 and 18 are described on p. 17, lines 14 - 17 and p. 19, line 9 (see also reference number **1095 of Fig. 10B**).

5. The “means for concluding ...” of dependent Claims 13 and 20 is discussed in the text on p. 19, lines 1 - 4 and p. 21, line 16 - p. 22, line 9, and depicted in **Fig. 10B** at reference numbers **1090 - 1095**. These same references also describe the “means for remembering ...” specified in dependent Claims 14 and 21 (and see also reference number **960 of Fig. 9B**).

6) GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

6. The ground of rejection presented for review is a rejection of Claims 1 - 21 under 35 U.S.C. §103(a), in view of U. S. Patent 6,554,187 to Otto and U. S. Patent 6,507,279 to Loof.

7) ARGUMENT

7. Paragraph 4 of the Office Action dated June 23, 2005 (hereinafter, "the Office Action") states that Claims 1 - 21 are rejected under 35 U.S.C. §103(a) as being unpatentable over U. S. 6,554,187 to Otto in view of U. S. 6,507,279 to Loof.

8. Appellants respectfully submit that a *prima facie* case of obviousness under 35 U.S.C. §103 has not been made out as to their Claims 1 - 21. Section 706.02(j) of the MPEP, "Contents of a 35 U.S.C. 103 Rejection", states the requirements for establishing a *prima facie* case of obviousness under this statute, noting that three criteria must be met. These criteria are (1) a suggestion or motivation, found either in the references or in the knowledge generally available, to modify or combine the references; (2) a reasonable expectation of success; and (3) the combination must teach or suggest all the claim limitations. This text goes on to state that "The initial burden is on the examiner to provide some suggestion of the desirability of doing what the inventor has done.". The three requirements for establishing a *prima facie* case of obviousness are also stated in MPEP §2142, "Legal Concept of *Prima Facie* Obviousness", and MPEP §2143, "Basic Requirements of a *Prima Facie* Case of Obviousness".

7.1) Rejection of Independent Claims 1, 8, and 15

9. Regarding the §103 rejection of independent Claims 1, 8, and 15, Appellants respectfully submit that a proper motivation for combining the references has not been provided, and that the references (whether taken singly or in combination) fail to teach or suggest all the claim limitations of these claims. The requirements described in paragraph 8, above, for establishing a *prima facie* case of obviousness have therefore not been met. Deficiencies in the §103 rejection will now be discussed in more detail.

10. Independent Claims 1, 8, and 15 specify limitations of (1) “creating a unique correlator value ... [for] items being purchased together ...” (Claim 1, lines 3 - 4) and (2) “storing [this] unique correlator value in an RFID tag affixed to each of the items, such that correlator values stored in RFID tags affixed to a group of items can subsequently be compared to determine whether the items in the group were all purchased in one transaction” (Claim 1, lines 5 - 7). On p. 3, lines 1 - 6, the Office Action cites text pertaining to Otto’s “transaction information” as being relevant to these claims. However, the Office Action then admits (see p. 3, lines 7 - 8 of the Office Action, emphasis added) that “Otto fails to specifically teach or fairly suggest that the RFID tags contain a correlator value which indicate[s] that the group of items are purchased together”. (The citations on p. 3, lines 1 - 6 of the Office Action are therefore deemed irrelevant; refer also to Section III, “Rejection under 35 U.S.C. §102(e)”, on pages 13 - 15 of Appellants’ Amendment/Response submitted on April 11, 2005, which is hereby incorporated herein by reference, where a detailed discussion of Otto establishes that this reference does not teach Appellants’ correlator values.) Accordingly, if -- as asserted in paragraph 4 of the Office Action -- a combination of Otto and Loof teaches the limitations of Appellants’ independent Claims 1, 8,

and 15, and those limitations are not taught or suggested by Otto (as admitted in the Office Action), then it must happen that Loof teaches or suggests these limitations. This is not the case, however, as will now be demonstrated.

11. Loof has no teaching, nor any suggestion, of creating unique correlator values for items being purchased together in a transaction, and then storing those unique values into RFID tags of the purchased items. Loof teaches a database **2** that stores a record of items purchased by customers, for each customer (referred to as the customer's "purchasing habits" data **43**); see Fig. **2**. However, this is information stored in a database, not in RFID tags of items being purchased. See also col. 2, lines 59 - 67, stating that the record of "articles purchased by the member [i.e., customer]" is contained in the database; and col. 3, line 34 and col. 4, lines 13 - 14, stating that the database contains records for each customer. Accordingly, while col. 4, lines 15 - 16 refer to "customer tracking data **14** correlated to date and time **16**", this is information stored in the customer's file in database **2** (col. 3, line 13), not in the RFID tags of items being purchased. (Appellants also respectfully note that the information discussed in col. 4, lines 47 - 67 of Loof is information stored in this customer database, not in RFID tags of items.)

12. Col. 4, lines 31 - 46 discuss actions taken when Loof's customer purchases an item. The final sentence of this text states "Purchase information for that item can also be written directly to the RFID tag to designate that the item has been sold ..." (col. 4, lines 44 - 46, emphasis added). Loof has no teaching, nor any suggestion, that "purchase information" means a unique correlator created for items being purchased together, and thus this sentence does not teach

Appellant's claim limitations. The purchase information might, for example, comprise a textual message "This item was paid for" (which is not a unique correlator value for items being purchased together, and therefore cannot be used to determine whether items in a group were all purchased in one transaction).

13. Furthermore, Loof does provide information about what he means by the term "purchase information", and it is not a transaction-specific (i.e., unique per transaction) correlator value for a plurality/group of items. See col. 4, lines 50 - 51, which refer to "credit and purchase information 42" that is stored in the customer database 2. Col. 4, lines 52 - 55 expand on this term, stating that it "can be any selected method of payment ..." (emphasis added). Clearly, a payment method is not a "unique correlator value", and therefore Loof's statement (col. 4, lines 44 - 46) that "purchase information" -- i.e., payment method information -- can be written into an RFID tag fails to teach or suggest Appellants' limitation of storing unique correlator values in RFID tags. See also col. 6, lines 17 - 21, describing a "new customer" routine in which "[t]he customer will enter credit and purchase information ... which will include the customer's preferred method of payment ..." (emphasis added). Thus, it can be seen that Loof uses the term "purchase information" in a consistent manner, signifying payment-method-related information (with no suggestion of any transaction-specific correlator values).

14. Appellants further note that Loof discusses item purchases in col. 5, line 48 - col. 6, line 3. As stated in col. 5, lines 48 - 51, when the customer decides to purchase selected items, the customer's "credit and purchase information 42" is retrieved from the customer database. There

is no teaching, nor any suggestion, that this information is unique per transaction (in contrast to the requirements of Appellants' claim language). Instead, lines 51 - 52 of col. 4 again suggest that Loof uses the term "credit and purchase information" as a synonym for "payment method", by stating that an alternate payment method (i.e., an alternative to the retrieved credit and purchase information, or equivalently, the retrieved payment method) can be selected by the customer.

15. Loof refers, in col. 5, lines 60 - 61, to "writing to the RFID tag". However, there is no teaching or suggestion that what is being written is a "unique correlator value, [created] for a current transaction". Instead, the discussion pertains to deactivating an electronic article surveillance ("EAS") function of a tag, as a means of detecting theft. See col. 5, line 52 - col. 6, line 3. In other words, Loof teaches that some type of "writing" to an RFID tag may be done for theft detection, and in fact, states (col. 5, lines 56 - 61, emphasis added) that "deactivation of the EAS function means deactivation of the EAS function associated with the RFID tag" of each purchased item, and that "[t]his may include" -- i.e., the deactivation may include -- writing to the RFID tag. Deactivating an EAS function prevents the tag from triggering an alarm when the tag passes through a scanner; see, e.g., col. 1, lines 26 - 38, where this is discussed. Writing to an RFID tag to deactivate its EAS function is patentably distinct from Appellants' claimed limitations of writing unique correlator values in tags.

16. Regarding Loof's use of the term "correlator", Loof teaches that a customer's purchasing habit information, stored in database 2, may be "correlated to date and time" (col. 4, lines 15 -

16). However, date and time does not provide a “unique correlator value, for a current transaction” (in contrast to Appellants’ Claim 1, line 3; emphasis added). Furthermore, storing purchase information in a customer’s file of database 2 -- even if the purchase date and time are included therein -- is patentably distinct from storing correlator values in RFID tags of purchased items, as claimed by Appellants (Claim 1, line 5). Loof also teaches that a “customer’s prior purchases can be simply correlated to the customer’s present location [in the controlled shopping area]” (col. 6, lines 49 - 50). A customer’s physical location is also not a “unique correlator value, [created] for a current transaction” (Claim 1, line 3).

17. Appellants respectfully submit that the discussion in paragraphs 11 - 16 above clearly shows that Loof does not teach limitations of their independent Claims 1, 8, and 15. Citations provided in the Office Action when analyzing these independent claims will now be discussed.

18. Step 48 in Loof’s Fig. 3 is cited (Office Action, p. 3, lines 11 - 12), referring to a customer being granted, or denied, access to a controlled-access area. (See also col. 2, lines 15 - 18, discussing this access-controlled shopping area.) Appellants respectfully submit that controlling access to a shopping area, such that only “authorized members” can shop therein, is not relevant to their claimed invention. Col. 5, lines 16+ are cited (Office Action, p. 3, line 12), referring to recording of a customer’s entry to, and exit from, the controlled-access shopping area. Again, this is not relevant to Appellants’ claimed invention. Lines 13 - 14 on p. 3 of the Office Action cite several passages of text in cols. 4 and 5, in terms of a customer selecting items while shopping. Appellants respectfully submit that this text has been discussed above, where it

was demonstrated that Loof fails to teach limitations of Appellants' independent Claims 1, 8, and 15. (See, for example, paragraphs 11 - 14 and 16, which discuss the cited text from col. 4, lines 10+; paragraph 12, which discusses the cited text from col. 4, lines 31 - 46; and paragraphs 14 - 15, which discuss the cited text from col. 5, line 48 - col. 6, line 3.)

19. Lines 14 - 16 on p. 3 of the Office Action state, in discussing Loof, that "Since the customer's visit (including up-to-the minute location) is also tracked, reading the purchase information from the [RFID] tag, the plurality of items can be grouped together by purchase date and time" (emphasis added). As noted above in paragraph 16, purchase date and time does not yield a unique transaction correlator value: in a large store, for example, a number of customers might purchase items simultaneously, in which case the date and time of purchase for transactions of these customers would be identical (i.e., not unique). Furthermore, as noted in paragraph 16 herein, Loof teaches that the correlation to date and time is stored in the customer file of the database 2, not in RFID tags of items. And, as discussed in paragraphs 12 - 14 above, the "purchase information" stored in Loof's RFID tags cannot fairly be interpreted as transaction-specific correlator values, but is instead, as taught by Loof, information related to the customer's preferred payment method.

20. Accordingly, as demonstrated by the discussion in paragraphs 11 - 19, Loof fails to teach the "creating" and "storing" limitations of Appellants' independent Claims 1, 8, and 15. As discussed in paragraph 10, Otto also fails to teach these limitations. Because the Office Action fails to cite references that teach all of the limitations of these independent claims, the Office

Action fails to meet the third requirement, discussed above in paragraph 8, for establishing a *prima facie* case of obviousness. The §103 rejection therefore violates the requirements of the above-noted Sections 706.02(j), 2142, and 2143 of the MPEP.

21. Furthermore, a proper motivation for combining the references has not been provided, and the Office Action therefore fails to meet the first requirement, discussed above in paragraph 8, for establishing a *prima facie* case of obviousness. Deficiencies in the supposed motivation to combine Otto and Loof, presented on p. 3, line 21 - p. 4, line 7 of the Office Action, to yield Appellants' independent claims will now be discussed.

22. Page 3, line 21 - p. 4, line 2 of the Office Action states that "it would have been obvious ... to incorporate recording detailed purchase information into RFID tag to the teachings of Otto in order to provide retailers with accurate information regarding the items." (emphasis added). Appellants respectfully disagree with this characterization of the references. Loof does not teach "recording detailed purchase information into RFID tag"; refer to the discussion in paragraphs 11 - 13 and 15 - 16, above. In particular, Loof fails to teach or suggest any type of "detailed purchase information" that can fairly be construed as "a unique correlator value, [created] for a current transaction" (in contrast to Appellants' Claim 1, line 3).

23. Furthermore, in contrast to the statement in the Office Action, a unique, transaction-specific correlator value (as specified in Appellants' claim language) does not necessarily "provide retailers with accurate information regarding the items [purchased]" (emphasis added).

For example, the unique correlator value might be generated as a long bit-string that provides no decipherable information other than to indicate, by comparison to another long bit-string, whether the bit-strings are identical (i.e., when comparing correlators stored in RFID tags to determine whether items were purchased in one transaction, according to Appellants' teachings). Appellants fail to see how this would "provide retailers with accurate information regarding the items".

24. Page 4, lines 2 - 4 of the Office Action state that "Not only [would] the retailers need to know whether ... an individual item is purchased at their store, but they would want to know if a plurality of items [for example, many items to be refunded or exchanged] were purchased at one transaction or not" (emphasis added). Appellants respectfully submit that the references provide no suggestion or motivation indicating that a retailer would find it useful to know whether refunded/exchanged items were purchased together, and no support for this assertion has been provided in the Office Action.

25. Page 4, lines 4 - 6 of the Office Action state that "Perhaps, Otto provides, although not in a greatly detailed manner, ... transactional information such as purchase time and date, which could be interpreted as part of transaction ID" (emphasis added). Appellants respectfully note that on the prior page of the Office Action (p. 3, lines 7 - 8), it has already been admitted that Otto does not "teach or fairly suggest" RFID tags containing a correlator value that could be used to indicate that a group of items was purchased together (e.g., in a particular transaction). And, as discussed above in paragraphs 16 and 19, time and date is insufficient for generating a unique

correlator value. Furthermore, Appellants' claim language does not specify creating "part of" a transaction ID (or "part of" a unique correlator value created for a current transaction).

Appellants are entitled to have all words of their claim language considered when judging the patentability of their claims. (See Section 2143.03 of the MPEP, "All Claim Limitations Must Be Taught or Suggested", which makes reference to the holding from *In re Wilson*, 165 USPQ 494, 496 (C.C.P.A. 1970), which stated "*All words* in a claim must be considered in judging the patentability of that claim against the prior art." (emphasis added).)

26. Accordingly, Appellants respectfully submit that the supposed motivation provided on p. 3, line 21 - p. 4, line 7 of the Office Action is flawed, and as noted in paragraph 21, a required element in the *prima facie* case for the §103 rejection is therefore missing.

27. As summarized in paragraphs 20 - 21 and 26, neither Otto nor Loof -- nor a combination thereof -- establishes a *prima facie* case of obviousness as to Appellants' independent Claims 1, 8, and 15. Without more, these claims are deemed patentable. See *In re Oetiker*, 24 USPQ 2d 1443, 1444 (Fed. Cir. 1992), which stated:

If the examination at the initial stage does not produce a *prima facie* case of unpatentability, then without more the applicant is entitled to grant of the patent.

7.2) Rejection of Dependent Claims 2, 9, and 16

28. Dependent Claims 2, 9, and 16 specify that the unique correlator is also stored "in a database of previous transactions, such that the subsequent comparison can consult the database

to determine whether any of the items in the group were purchased in any of the previous transactions [instead of the “one” transaction]”.

29. When analyzing these dependent claims, the Office Action states (p. 3, lines 16 - 20) that Loof’s database is “quite extensive”. However, as has been demonstrated above with regard to independent Claims 1, 8, and 15, Loof does not teach creating unique correlator values for the items purchased together in a current transaction, and therefore having an “extensive” database is insufficient for teaching the limitations of dependent Claims 2, 9, and 16. Accordingly, a *prima facie* case of obviousness has not been made out as to these claims.

30. Because a *prima facie* case of obviousness has not been made out as to dependent Claims 2, 9, and 16, as demonstrated by paragraph 29, these claims are deemed patentable, according to the holding in the above-quoted *In re Oetiker*.

31. Furthermore, having failed to establish that independent Claims 1, 8, and 15 are obvious, the rejection of dependent Claims 2, 9, and 16 necessarily fails. See §2143.03 of the MPEP, which states that

If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious.

In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). Dependent Claims 2, 9, and 16 are therefore deemed nonobvious for this reason as well.

7.3) Rejection of Independent Claims 3, 10, and 17

32. Independent Claims 3, 10, and 17 also specify limitations not taught nor suggested by Otto and/or Loof, as will now be discussed.

33. The first limitation of these claims specifies “a correlator value previously written [in an RFID tag attached to each of a plurality of items] as a unique, transaction-specific value” (Claim 3, lines 3 - 4, emphasis added). Neither Otto nor Loof teaches this limitation, whether taken singly or in combination. Refer to “**7.1) Rejection of Independent Claims 1, 8, and 15**”, above (hereinafter, “Section 7.1”), where this has been discussed in detail.

34. The second limitation of Appellants’ independent Claims 3, 10, and 17 specifies “concluding that selected ones of the items possessed by the shopper were potentially not paid for if the located correlator value [i.e., the correlator value located in a selected item’s RFID tag] ... is not identical to the located correlator value for the other possessed items” (Claim 3, lines 5 - 7, emphasis added). It has been established above in Section 7.1 that neither Otto nor Loof teaches “correlator values” as that term is used in Appellants’ claims. Accordingly, it necessarily follows that the references fail to teach making conclusions based on whether correlator values are identical, as claimed by Appellants in this limitation of their independent Claims 3, 10, and 17.

35. Because Otto and Loof fail to teach the limitations of Appellants’ independent Claims 3, 10, and 17, a *prima facie* case of obviousness has not been made out as to those claims, and

without more, they are deemed patentable. (See paragraph 27, above, citing the holding from *In re Oetiker*.) Refer also to the discussion in paragraphs 21 - 26, above, which demonstrated that the motivation for combining Otto and Loof is improper. As this motivation was also used for independent Claims 3 and 17 (Office Action, p. 3, line 1), the §103 rejection of these claims also fails due to absence of proper motivation in the *prima facie* case.

7.4) Rejection of Dependent Claims 4 - 7, 11 - 14, and 18 - 21

36. Dependent Claims 4, 11, and 18 specify limitations of determining whether items were paid for in a previous transaction by searching a database wherein correlator values of previous transactions are recorded (Claim 4, lines 2 - 5), and if an item's correlator value is found therein, concluding that this item was paid for (Claim 4, lines 6 - 7).

37. When analyzing these dependent claims, the Office Action states (p. 3, lines 18 - 20) that Loof's database is "quite extensive". However, as has been demonstrated above in Section 7.1, Loof does not teach creating unique correlator values for the items purchased together in a current transaction, and therefore having an "extensive" database is insufficient for teaching the limitations of dependent Claims 4, 11, and 18. Accordingly, a *prima facie* case of obviousness has not been made out as to these claims.

38. Because a *prima facie* case of obviousness has not been made out as to dependent Claims 4, 11, and 18, as demonstrated by paragraph 37, these claims are deemed patentable, according to the holding in the above-quoted *In re Oetiker*.

39. Dependent Claims 5, 12, and 19 specify that the correlator value previously written into an item's RFID tag was created "for a particular transaction comprising a plurality of items purchased together" (Claim 5, lines 1 - 2) and "was written in an RFID tag affixed to each of the items ... such that the items are thereby associated with one another ..." (Claim 5, lines 3 - 5).

40. When analyzing these dependent claims, the Office Action refers (p. 3, lines 1 - 6) to citations from Otto. However, the following lines 7 - 8 on p. 3 of the Office Action admit that Otto does not teach "that the RFID tags contain a correlator value which indicate[s] that the group of items are purchased together". As discussed above in paragraph 10, the citations to Otto on p. 3, lines 1 - 6 are deemed to be irrelevant, and it is admitted in the Office Action that Otto fails to teach Appellants' correlator values. Section 7.1 further establishes that Loof fails to teach Appellants' correlator values. Accordingly, neither Otto nor Loof -- nor a combination thereof -- teaches the limitations of Appellants' dependent Claims 5, 12, and 19, and therefore a *prima facie* case of obviousness has not been made out as to these claims.

41. Because a *prima facie* case of obviousness has not been made out as to dependent Claims 5, 12, and 19, as demonstrated by paragraph 40, these claims are deemed patentable, according to the holding in the above-quoted *In re Oetiker*.

42. Dependent Claims 6, 13, and 20 specify limitations pertaining to whether items were in a shopper's possession "when the shopper entered an establishment in which a transaction represented by the correlator value [stored in an item's RFID tag] was conducted" (Claim 6, lines

2 - 4). Dependent Claims 7, 14, and 21 specify a limitation of “remembering each item that was in the shopper’s possession when the shopper entered [the] establishment ...” (Claim 7, lines 1 - 3).

43. When analyzing these dependent claims, the Office Action cites (p. 4, lines 8 - 10) text pertaining to Otto’s “store ID” and RFID information “at the transaction level”. However, what is taught by Otto regarding his “store RFID labels 12” and “customer RFID labels 26” (see col. 2, lines 37 - 38 of Otto) is that the labels are checked to see whether the customer’s items were purchased in another store, and not (in contrast to Appellants’ independent Claims 3, 10, and 17) whether the items have an identical correlator value. See, for example, col. 3, lines 14 - 17 and lines 34 - 43 (stating that the “purchase information” contained in Otto’s RFID tags is only checked if the item has an RFID label from another store; see also Blocks 50 and 52 in Fig. 2). Furthermore, as admitted in the Office Action, Otto fails to teach correlator values. Accordingly, a *prima facie* case of obviousness has not been made out as to these claims.

44. Because a *prima facie* case of obviousness has not been made out as to dependent Claims 6 - 7, 13 - 14, and 20 - 21, as demonstrated by paragraph 43, these claims are deemed patentable, according to the holding in the above-quoted *In re Oetiker*.

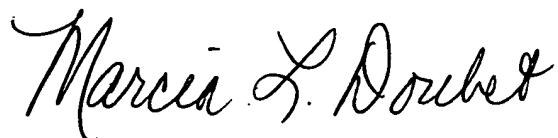
45. Furthermore, having failed to establish that independent Claims 3, 10, and 17 are obvious, the rejection of dependent Claims 4 - 7, 11 - 14, and 18 - 21 necessarily fails. See paragraph 31, above, citing *In re Fine*. Dependent Claims 4 - 7, 11 - 14, and 18 - 21 are

therefore deemed nonobvious for this reason as well.

8) CONCLUSION

For the reasons set out above, Appellants respectfully contend that each appealed claim is patentable, and respectfully requests that Examiner's Final Rejection of appealed Claims 1 - 21 should be reversed.

Respectfully submitted,



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CLAIMS APPENDIX

CLAIMS AS CURRENTLY PRESENTED:

1. 1. A method of preparing information usable in theft detection using radio frequency identification (“RFID”) technology, comprising steps of:
 - 3 creating a unique correlator value, for a current transaction comprising a plurality of items
 - 4 being purchased together, as a function of one or more values; and
 - 5 storing the unique correlator value in an RFID tag affixed to each of the items, such that
 - 6 correlator values stored in RFID tags affixed to a group of items can subsequently be compared
 - 7 to determine whether the items in the group were all purchased in one transaction.
- 1 2. The method according to Claim 1, further comprising the step of storing the unique correlator value in a database of previous transactions, such that the subsequent comparison can consult the database to determine whether any of the items in the group were purchased in any of the previous transactions if those items are determined not to have been purchased in the one transaction.
- 1 3. A method of detecting potential theft using radio frequency identification (“RFID”) technology, comprising steps of:
 - 3 locating, in an RFID tag affixed to each of a plurality of items possessed by a shopper, a correlator value previously written therein as a unique, transaction-specific value; and
 - 5 concluding that selected ones of the items possessed by the shopper were potentially not paid for if the located correlator value for the selected items is not identical to the located

7 correlator value for the other possessed items.

1 4. The method according to Claim 3, further comprising the steps of:

2 determining whether each of the selected items was paid for in a previous transaction by
3 searching a database of previous transactions wherein correlator values of the previous
4 transactions are stored, looking for the correlator value found in the RFID tag of that selected
5 item; and

6 concluding that the selected item was paid for if the correlator value for that selected item
7 is located in the determining step.

1 5. The method according to Claim 3, wherein the previously-written correlator value was
2 created, for a particular transaction comprising a plurality of items purchased together, using a
3 function computed over one or more values, and was written in an RFID tag affixed to each of
4 the items in the particular transaction, such that the items are thereby associated with one
5 another, prior to operation of the locating step.

1 6. The method according to Claim 3, wherein the concluding step concludes that selected ones
2 of the possessed items were paid for if those selected ones were in the shopper's possession when
3 the shopper entered an establishment in which a transaction represented by the correlator value
4 was conducted.

1 7. The method according to Claim 3, further comprising the step of remembering each item that

2 was in the shopper's possession when the shopper entered an establishment in which a
3 transaction represented by the correlator value was conducted, and wherein the locating and
4 concluding steps do not apply to the remembered items.

1 8. A system for preparing information usable in theft detection using radio frequency
2 identification ("RFID") technology, comprising:

3 means for creating a unique correlator value, for a current transaction comprising a
4 plurality of items being purchased together, as a function of one or more values; and
5 means for storing the unique correlator value in an RFID tag affixed to each of the items,
6 such that correlator values stored in RFID tags affixed to a group of items can subsequently be
7 compared to determine whether the items in the group were all purchased in one transaction.

1 9. The system according to Claim 8, further comprising means for storing the unique correlator
2 value in a database of previous transactions, such that the subsequent comparison can consult the
3 database to determine whether any of the items in the group were purchased in any of the
4 previous transactions if those items are determined not to have been purchased in the one
5 transaction.

1 10. A system for detecting potential theft using radio frequency identification ("RFID")
2 technology, comprising:
3 means for locating, in an RFID tag affixed to each of a plurality of items possessed by a
4 shopper, a correlator value previously written therein as a unique, transaction-specific value; and

5 means for concluding that selected ones of the items possessed by the shopper were
6 potentially not paid for if the located correlator value for the selected items is not identical to the
7 located correlator value for the other possessed items.

1 11. The system according to Claim 10, further comprising:

2 means for determining whether each of the selected items was paid for in a previous
3 transaction by searching a database of previous transactions wherein correlator values of the
4 previous transactions are stored, looking for the correlator value found in the RFID tag of that
5 selected item; and

6 means for concluding that the selected item was paid for if the correlator value for that
7 selected item is located by the means for determining.

1 12. The system according to Claim 10, wherein the previously-written correlator value was
2 created, for a particular transaction comprising a plurality of items purchased together, using a
3 function computed over one or more values, and was written in an RFID tag affixed to each of
4 the items in the particular transaction, such that the items are thereby associated with one
5 another, prior to operation of the means for locating.

1 13. The system according to Claim 10, wherein the means for concluding concludes that
2 selected ones of the possessed items were paid for if those selected ones were in the shopper's
3 possession when the shopper entered an establishment in which a transaction represented by the
4 correlator value was conducted.

1 14. The system according to Claim 10, further comprising means for remembering each item
2 that was in the shopper's possession when the shopper entered an establishment in which a
3 transaction represented by the correlator value was conducted, and wherein the means for
4 locating and means for concluding do not apply to the remembered items.

1 15. A computer program product for preparing information usable in theft detection using radio
2 frequency identification ("RFID") technology, the computer program product embodied on one
3 or more computer-readable media and comprising:

4 computer-readable program code means for creating a unique correlator value, for a
5 current transaction comprising a plurality of items being purchased together, as a function of one
6 or more values; and

7 computer-readable program code means for storing the unique correlator value in an
8 RFID tag affixed to each of the items, such that correlator values stored in RFID tags affixed to a
9 group of items can subsequently be compared to determine whether the items in the group were
10 all purchased in one transaction.

1 16. The computer program product according to Claim 15, further comprising computer-
2 readable program code means for storing the unique correlator value in a database of previous
3 transactions, such that the subsequent comparison can consult the database to determine whether
4 any of the items in the group were purchased in any of the previous transactions if those items are
5 determined not to have been purchased in the one transaction.

1 17. A computer program product for detecting potential theft using radio frequency
2 identification (“RFID”) technology, the computer program product embodied on one or more
3 computer-readable media and comprising:

4 computer-readable program code means for locating, in an RFID tag affixed to each of a
5 plurality of items possessed by a shopper, a correlator value previously written therein as a
6 unique, transaction-specific value; and

7 computer-readable program code means for concluding that selected ones of the items
8 possessed by the shopper were potentially not paid for if the located correlator value for the
9 selected items is not identical to the located correlator value for the other possessed items.

1 18. The computer program product according to Claim 17, further comprising:

2 computer-readable program code means for determining whether each of the selected
3 items was paid for in a previous transaction by searching a database of previous transactions
4 wherein correlator values of the previous transactions are stored, looking for the correlator value
5 found in the RFID tag of that selected item; and

6 computer-readable program code means for concluding that the selected item was paid for
7 if the correlator value for that selected item is located by the computer-readable program code
8 means for determining.

1 19. The computer program product according to Claim 17, wherein the previously-written
2 correlator value was created, for a particular transaction comprising a plurality of items

3 purchased together, using a function computed over one or more values, and was written in an
4 RFID tag affixed to each of the items in the particular transaction, such that the items are thereby
5 associated with one another, prior to operation of the computer-readable program code means for
6 locating.

1 20. The computer program product according to Claim 17, wherein the computer-readable
2 program code means for concluding concludes that selected ones of the possessed items were
3 paid for if those selected ones were in the shopper's possession when the shopper entered an
4 establishment in which a transaction represented by the correlator value was conducted.

1 21. The computer program product according to Claim 17, further comprising computer-
2 readable program code means for remembering each item that was in the shopper's possession
3 when the shopper entered an establishment in which a transaction represented by the correlator
4 value was conducted, and wherein the computer-readable program code means for locating and
5 computer-readable program code means for concluding do not apply to the remembered items.

EVIDENCE APPENDIX

Appellants, the Appellants' legal representative, and the assignee have no personal knowledge of evidence requiring separate identification herein as bearing on this Appeal.

RELATED PROCEEDINGS APPENDIX

No related proceedings are personally known to Appellants, the Appellants' legal representative, or the assignee.



Atty. Docket No. RSW920030196US1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of James M. Mathewson II et al.

Serial Nbr: 10/666,287 Filed: September 19, 2003
For: Using Radio Frequency Identification with Transaction-Specific Correlator
Values to Detect and/or Prevent Theft and Shoplifting
Art Unit: 2876 Examiner: Ahshik Kim

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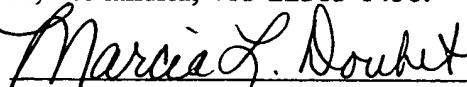
WE REQUEST THE DATE OF DEPOSIT AS THE DATE FILED.

I hereby certify that the following enclosed or attached papers and fee

- (1) Transmittal of Patent Appeal Brief, requesting payment of Appeal Brief Fee from deposit account (1 page, in duplicate)
- (2) Appeal Brief (29 pages)
- (3) Business Reply Postcard

are being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 C.F.R. §1.10 on the date indicated above and are addressed to Mail Stop Appeal Brief - Patents, Commissioner for Patents, Alexandria, VA 22313-1450.

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